

23
cont

(b) expanding a portion of the catheter to provide controllable expansion of the endovascular expandable prosthesis outwardly into contact with the body passageway, by deforming [a portion of the endovascular expandable prosthesis] at least some of said plurality of elongate members with a force in excess of the elastic limit of [the portion of the expandable prosthesis] said elongate members, until the lumen of the body passageway at the desired location in the body passageway has been expanded, whereby the endovascular expandable prosthesis prevents the body passageway from collapsing, and the endovascular expandable prosthesis remains in the passageway.

REMARKS

Reconsideration of the present application, as amended, is respectfully requested. The application includes claims 28-34 in which claims 31-34 have been substantially copied from the patent issued to Palmaz, No. 4,733,665, for the purpose of provoking an interference between the present application and that patent.

Applicant would first like to express his appreciation to Examiner Lewis for the personal interview conducted with Applicant's attorney on May 23, 1990. The interview included discussion of the foregoing amendments to claims 28 and 29 to overcome the Rockey, Choudhury and Maas et al. references, and of the amendments to claims 31-34 with respect to the cited Palmaz articles.

During the interview, the Examiner referred to two articles listing Applicant as a co-author. The Examiner directed attention to the case of In re Katz, 215 U.S.P.Q. 14 (C.C.P.A. 1982) which concerned the impact of 35 U.S.C. §§102(f) and (g) on articles co-authored by other persons along with the named inventor. The cited case suggests that some form of proof of inventorship may be necessary

when a publication is ambiguous as to who invented the subject matter. In re Katz, supra at 16. Applicant's claims have not been rejected under §§102(f) or (g), nor has any formal requirement for evidence of inventorship been issued by the Examiner. Nevertheless, Applicant directs the Examiner's attention to the affidavits of Dr. Cesar Gianturco and Kenneth Wright, Ph.D, that accompanied Applicant's Submission of Prima Facie Evidence of Priority filed on December 28, 1988 (Paper No. 5). Mr. Wright is one of the co-authors of the articles of record. In his affidavit, Mr. Wright states that Dr. Gianturco disclosed the wire stent that is the subject matter of the present invention. In his own affidavit, Dr. Gianturco describes his development of the stent. It is believed that these affidavits establish sole inventorship in Dr. Gianturco and support Dr. Gianturco's Declaration originally filed with this application.

Claim 28 was rejected as anticipated by the patent to Rockey. The foregoing amendment to claim 28 was discussed during the personal interview. It was pointed out that the Rockey device retains its expanded shape by the use of a solidifier injected into the sleeve when it is expanded. It was agreed during the interview that the Rockey device does not appear to undergo inelastic deformation as defined in claim 28. It is, therefore, believed that claim 28 as amended is allowable over the art of record.

Claim 29 was rejected as anticipated by the patents to either Choudhury or Maas et al. Claim 29 has been amended to clarify that the stent retains its expanded outer diameter upon removal of the outwardly extending force used to expand the stent. It was pointed out during the personal interview that the Maas device appears to expand by application of a torsional force to the device or by releasing stored torsional energy in a coiled spring. Consequently, it was

agreed that Maas does not appear to disclose expansion of a stent by application from the interior of the stent of an outwardly directed force, as defined in claim 29.

With respect to the Choudhury reference, it was pointed out during the interview that Choudhury appears to rely upon rings 32 to cause outward expansion of the Dacron tube 24 and to retain the expanded shape of the graft. Col. 2, l. 55-56, Col. 3, l. 39-44. Moreover, Choudhury discusses use of the hydrodynamic pressure of blood passing through the graft for facilitating maintenance of the expanded formation. Col. 3, l. 46-49. Thus, as was agreed at the interview, Choudhury does not appear to disclose or suggest the limitation of claim 29 that the stent retain its expanded diameter upon removal of the expansion force. It is believed that claim 29 as amended is allowable over the art of record.

Claims 28 and 29 were also rejected under the doctrine of obviousness-type double patenting. Pursuant to 37 C.F.R. 1.78(d), Applicant will submit a terminal disclaimer when the application is otherwise in condition for allowance.

No specific action was issued for claim 30. However, as was discussed during the personal interview, claim 30 defines inelastic deformation of the stent while maintaining the longitudinal length of the stent. It was indicated during the interview that the combination of these two features is neither described in nor suggested by any of the references of record. Thus, claim 30 is believed to be allowable.

Claims 31-34 were rejected as anticipated by three published articles of Palmaz. Claim 32 has been cancelled. Claims 31, 33 and 34 have been amended in accordance with the discussion at the May 23rd interview. In particular, these claims have been amended to define the expandable prosthesis as being formed by a plurality of elongate members in which some of the elongate members are

deformed by the outwardly extending force. It was pointed out during the interview that it appears that the Palmaz devices described in the cited articles retain their expanded configuration by deformation of the soldered joints between the intersecting wires, rather than by deformation of the wires themselves. See, e.g., "Expandable intraluminal vascular graft", Surgery at p.203, col. 1, l.25-29.

Applicant submits the declaration of Paul Eaton, Professor Emeritus of Materials Engineering at Purdue University, in which Mr. Eaton states that the deformation in the Palmaz devices described in those articles would have occurred at the weakest part of those devices - the solder joint. Mr. Eaton's analysis in the declaration attached hereto indicates that at least the Palmaz devices described in the cited articles did not appear to operate by deformation of the wires themselves, as defined by Applicant's claims 31, 33 and 34. It is, therefore, submitted that claims 31, 33 and 34, as amended, are no longer anticipated by the cited references. Likewise, Applicant's invention defined in these claims are non-obvious in view of the disclosures in the Palmaz articles of deformation of solder joints. It is believed that these claims are patentable to Applicant and can properly be the subject of an interference with the Palmaz patent.

Applicant maintains that an interference is proper between Applicant's amended claims 31, 33 and 34 and at least Palmaz claims 1, 7, 13 and 18. Applicant would retain Proposed Counts 1, 3 and 4 as set forth in Applicant's Paper No. 5. (Since claim 32 has been cancelled, Applicant withdraws Proposed Count 2). The Proposed Counts are not specifically limited to deformation of elongate members but more broadly define expansion of a portion of the stent, which portion may include the elongate members.

As discussed in Applicant's prior request for interference (Paper No. 5), Palmaz claims 13 and 18 correspond to Count 1, claim 1 corresponds to Count 3, and Palmaz claim 7 corresponds to Proposed Count 4. Applicant's claims 31, 33 and 34 correspond to Counts 1, 3 and 4, respectively. Proposed Count 1 is broader than Palmaz claims 13 and 18, and Applicant's claim 31, due to its definition of deformation of a "portion" of the stent, as opposed to definition of deformation of the elongated members themselves, as defined in the corresponding claims. Counts 3 and 4 are broader than Palmaz claims 1 and 7, respectively, since these counts do not include the radial limitation for the outward expansion found in the Palmaz claims. These two counts are also broader than Applicant's claims 33 and 34 as amended in view of the limitation in claims 33 and 34 of deformation of the elongated members.

In view of the foregoing amendments and remarks, it is believed that claims 28-30 are allowable over the art of record. It is also submitted that claims 31, 33 and 34, as amended, are patentable to Applicant, particularly over the cited Palmaz articles. Applicant further requests that an interference be declared between the present application and the patent to Palmaz, No. 4,733,665, identifying the previously-identified Proposed Counts 1, 3 and 4 with claims 31, 33 and 34 of the present application, and at least claims 1, 7, 13 and 18 of the Palmaz patent.

Respectfully submitted,

By 

Michael D. Beck
Reg. No. 32,722
Woodard, Emhardt, Naughton
Moriarty & McNett
One Indiana Square, Suite 2000
Indianapolis, Indiana 46204

(317) 634-3456